

E1	USPAT	1	GRABSKI, MICHELLE L/IN
E2	USPAT	1	GRABSKY, NACHMAN/IN
E3	USPAT	0 -->	GRABSTEIN/IN
E4	USPAT	2	GRABSTEIN, KENNETH/IN
E5	USPAT	9	GRABSTEIN, KENNETH H/IN
E6	USPAT	1	GRABUN, JON/IN
E7	USPAT	3	GRABUSCHNIG, JOSEF/IN
E8	USPAT	1	GRABYLNKOVA, VALENTINA I/IN
E9	USPAT	2	GRACCO, FRANCIS/IN
E10	USPAT	4	GRACE, ALAN G/IN
E11	USPAT	4	GRACE, ALAN G V/IN
E12	USPAT	3	GRACE, ARCHIE R/IN

=> s e4,e5

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      2 "GRABSTEIN, KENNETH"/IN
      9 "GRABSTEIN, KENNETH H"/IN
L1    11 ("GRABSTEIN, KENNETH"/IN OR "GRABSTEIN, KENNETH H"/IN)

```

=> d 11 1-11

1. 5,707,616, Jan. 13, 1998, Method for treating or preventing gastrointestinal disease with epithelium-derived T-cell factor; **Kenneth H. Grabstein**, et al., 424/85.2; 435/69.52, 252.3, 320.1, 325; 514/2, 8, 12, 885; 530/351 [IMAGE AVAILABLE]
2. 5,681,557, Oct. 28, 1997, Use of interleukin-7 to induce monocytes/macrophages cytotoxic activity; **Kenneth H. Grabstein**, et al., 424/85.2; 514/2, 8, 885; 530/351 [IMAGE AVAILABLE]
3. 5,660,824, Aug. 26, 1997, Muscle trophic factor; **Kenneth H. Grabstein**, et al., 424/85.2; 530/351 [IMAGE AVAILABLE]
4. 5,574,138, Nov. 12, 1996, Epithelium-derived T-cell factor; **Kenneth H. Grabstein**, et al., 530/351; 424/85.2; 435/69.52 [IMAGE AVAILABLE]
5. 5,552,303, Sep. 3, 1996, DNA encoding epithelium-derived T-cell factor; **Kenneth Grabstein**, et al., 435/69.51, 320.1, 348, 360; 530/351; 536/23.52 [IMAGE AVAILABLE]
6. 5,474,769, Dec. 12, 1995, Treatment of microbial infection by monocyte stimulation with interleukin-7; **Kenneth Grabstein**, et al., 424/85.2; 514/2; 530/351 [IMAGE AVAILABLE]
7. 5,162,111, Nov. 10, 1992, Treatment of bacterial diseases with granulocyte-macrophage colony stimulating factor; **Kenneth H. Grabstein**, et al., 424/85.1; 435/320.1; 514/2, 8; 530/351, 395; 536/23.5, 23.51; 930/145 [IMAGE AVAILABLE]
8. 5,122,459, Jun. 16, 1992, Gene encoding biologically active human interleukin 1; Paul J. Conlon, III, et al., 435/69.52, 69.1, 91.41, 91.51, 172.3, 254.21, 320.1, 942; 530/350; 536/23.5, 24.1; 935/13, 28, 37, 56, 61, 69 [IMAGE AVAILABLE]
9. 5,078,996, Jan. 7, 1992, Activation of macrophage tumoricidal activity by granulocyte-macrophage colony stimulating factor; Paul J. Conlon, III, et al., 424/85.1, 93.71, 534; 435/69.5, 172.2, 172.3; 514/2, 8, 21; 530/350, 351, 828; 536/23.5, 23.51 [IMAGE AVAILABLE]
10. 5,006,465, Apr. 9, 1991, Process for preparing bovine interleukin-2; Dirk M. Anderson, et al., 435/69.52, 69.1, 69.8, 172.3, 252.3, 252.33, 254.21, 320.1; 530/350; 935/18, 28, 29, 41, 48, 56, 63, 69, 73, 81 [IMAGE AVAILABLE]

11. 4,882,282, Nov. 21, 1989, DNA sequences encoding bovine interleukin-2; Dirk M. Anderson, et al., 435/252.3, 69.52, 91.41, 91.51, 172.3, 254.2, 320.1; 536/23.5, 23.51; 935/11, 29, 37, 38, 56, 60, 69 [IMAGE AVAILABLE]

=> s gamma(w)chain)

UNMATCHED RIGHT PARENTHESIS 'CHAIN)'

=> s (gamma(w)chain)(P)(cytokine? or lymphokine? or interleukin?)

91388 GAMMA
287976 CHAIN
2927 CYTOKINE?
2166 LYMPHOKINE?
4461 INTERLEUKIN?
L2 11 (GAMMA(W)CHAIN)(P)(CYTOKINE? OR LYMPHOKINE? OR INTERLEUKIN?)
)

=> s l2(P)antibod?

26891 ANTIBOD?
L3 2 L2(P)ANTIBOD?

=> d l3 1-2

1. 5,582,826, Dec. 10, 1996, Monoclonal **antibodies** which bind the **gamma chain** of human **interleukin-2** receptor; Toshiro Shimamura, et al., 424/143.1; 530/387.1, 388.1, 388.22, 388.23 [IMAGE AVAILABLE]

2. 4,474,892, Oct. 2, 1984, Two-site immunoassays using monoclonal antibodies of different classes or subclasses and test kits for performing same; Ferid Murad, et al., 436/513, 519, 548, 804, 808, 819, 824, 828 [IMAGE AVAILABLE]

=> d l3 1-2 kwic

US PAT NO: 5,582,826 [IMAGE AVAILABLE] L3: 1 of 2
TITLE: Monoclonal **antibodies** which bind the **gamma chain** of human **interleukin-2** receptor

CLAIMS:

CLMS(1)

What is claimed is:

1. A polypeptide which (1) is a monoclonal **antibody** produced by the hybridoma cells of TUGh4 (FERM BP 4642), TUGh5 (FERM BP4643) or AG14 (FERM BP 4648) and (2) has an activity of inhibiting human **interleukin 2** triggered responses which result by binding of the **.gamma. chain** of human **interleukin 2** receptor to the **.beta.-chain** of human **interleukin 2** receptor.

CLAIMS:

CLMS(2)

2. An immunosuppressant composition comprising a carrier and a therapeutically effective amount of a polypeptide which (1) is a monoclonal **antibody** produced by the hybridoma cells of TUGh4 (FERM BP 4642), TUGh5 (FERM BP4643) or AG14 (FERM BP 4648) and (2) has an activity

of inhibiting human **interleukin 2** triggered responses which result by binding of the **.gamma. chain** of human **interleukin 2** receptor to the **.beta.-chain** of human **interleukin 2** receptor.

US PAT NO: 4,474,892 [IMAGE AVAILABLE]

L3: 2 of 2

DETDESC:

DETD(3)

The . . . have two or more antigenic determinants (epitopes) that are distinct (not identical) immunologically and whose sites are such that complementary **antibodies** may recognize and bind to them. The term "antigen" as used herein is intended to include both immunogenic entities (entities that elicit an immune response) as well as entities (haptens) that are recognized and bound by **antibodies** but do not elicit an immune response. Antigens present in body fluids include cells, enzymes, proteins, peptides, cell surface antigens and other cellular components, differentiation antigens, **lymphokines**, growth factors, hormones, drugs, toxins, viruses bacteria and other pathogens. Specific examples of multideterminant antigens for which two-site assays have. . . growth hormone, tetanus toxin, albumin, ovalbumin, X antigen, ferritin, GFA protein, S-100 protein, alpha-fetoprotein, antithymocyte globulin, blood coagulation factor VIII, **.gamma. chain** of hemoglobin F, follicle-stimulating hormone, and human chorionic gonadotropin.

=> d 13 1-2 date

L3: 1 of 2

TITLE: Monoclonal **antibodies** which bind the **gamma chain** of human **interleukin-2** receptor

US PAT NO: 5,582,826

DATE ISSUED: Dec. 10, 1996

[IMAGE AVAILABLE]

APPL-NO: 08/230,843

DATE FILED: Apr. 21, 1994

FRN-PR. NO: 5-094491

FRN FILED: Apr. 21, 1993

FRN-PR. CO: Japan

FRN-PR. NO: 6-036065

FRN FILED: Mar. 7, 1994

FRN-PR. CO: Japan

L3: 2 of 2

TITLE: Two-site immunoassays using monoclonal antibodies of different classes or subclasses and test kits for performing same

US PAT NO: 4,474,892

DATE ISSUED: Oct. 2, 1984

[IMAGE AVAILABLE]

APPL-NO: 06/466,798

DATE FILED: Feb. 16, 1983

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Welcome to MESSENGER (APS Text) at USPTO
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The USPTO production files are current through:
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FEB 24 1998 for U.S. Patent Text Data.
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FEB 24 1998 for U.S. Current Classification data.
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FEB 24 1998 for U.S. Patent Image Data.
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* PLEASE USE 305-9000 FOR NEW TELEPHONE NUMBER *
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More U.S. patent data is now available on APS. The new
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USOCR file contains patents issued in 1970, plus some
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patents that were missing from the USPAT file. See the
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Patents News Folder under the Public Folders in e-mail for
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more information on using the new file. Thank you.
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DISCLAIMER:
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Neither the United States Government, nor any agency
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thereof, nor any of their contractors, subcontractors or
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employees make any warranty, expressed or implied,
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including any warranty of marketability of fitness for a
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particular purpose; nor assumes any legal liability or
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responsibility for any party's use, or the results of
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such, of the data.
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Help Desk --> 703-305-9000
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The Help Desk is staffed for APS support 7 days/week.
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Monday through Friday:      6:30am - 9:00pm
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Saturday, Sunday, Holidays: 8:30am - 5:00 pm
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The Help Desk staff at this number will handle all APS
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related questions.
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The APS is available:
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        6:30am - 9:00pm Monday through Friday
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        7:30am - 5:00pm Saturday, Sunday, Holidays
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APS is unavailable Thanksgiving Day, Christmas Day,
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and New Year's Day.
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W E L C O M E T O T H E
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U . S . P A T E N T T E X T F I L E
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E1	USPAT	1	GRABSKI, MICHELLE L/IN
E2	USPAT	1	GRABSKY, NACHMAN/IN
E3	USPAT	0 -->	GRABSTEIN/IN
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E6	USPAT	1	GRABUN, JON/IN
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E10	USPAT	4	GRACE, ALAN G/IN
E11	USPAT	4	GRACE, ALAN G V/IN
E12	USPAT	3	GRACE, ARCHIE R/IN

=> s e4,e5

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      2 "GRABSTEIN, KENNETH"/IN
      9 "GRABSTEIN, KENNETH H"/IN
L1      11 ("GRABSTEIN, KENNETH"/IN OR "GRABSTEIN, KENNETH H"/IN)

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=> d 11 1-11

1. 5,707,616, Jan. 13, 1998, Method for treating or preventing gastrointestinal disease with epithelium-derived T-cell factor; **Kenneth H. Grabstein**, et al., 424/85.2; 435/69.52, 252.3, 320.1, 325; 514/2, 8, 12, 885; 530/351 [IMAGE AVAILABLE]
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3. 5,660,824, Aug. 26, 1997, Muscle trophic factor; **Kenneth H. Grabstein**, et al., 424/85.2; 530/351 [IMAGE AVAILABLE]
4. 5,574,138, Nov. 12, 1996, Epithelium-derived T-cell factor; **Kenneth H. Grabstein**, et al., 530/351; 424/85.2; 435/69.52 [IMAGE AVAILABLE]
5. 5,552,303, Sep. 3, 1996, DNA encoding epithelium-derived T-cell factor; **Kenneth Grabstein**, et al., 435/69.51, 320.1, 348, 360; 530/351; 536/23.52 [IMAGE AVAILABLE]
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9. 5,078,996, Jan. 7, 1992, Activation of macrophage tumoricidal activity by granulocyte-macrophage colony stimulating factor; Paul J. Conlon, III, et al., 424/85.1, 93.71, 534; 435/69.5, 172.2, 172.3; 514/2, 8, 21; 530/350, 351, 828; 536/23.5, 23.51 [IMAGE AVAILABLE]
10. 5,006,465, Apr. 9, 1991, Process for preparing bovine interleukin-2; Dirk M. Anderson, et al., 435/69.52, 69.1, 69.8, 172.3, 252.3, 252.33, 254.21, 320.1; 530/350; 935/18, 28, 29, 41, 48, 56, 63, 69, 73, 81 [IMAGE AVAILABLE]

11. 4,882,282, Nov. 21, 1989, DNA sequences encoding bovine interleukin-2; Dirk M. Anderson, et al., 435/252.3, 69.52, 91.41, 91.51, 172.3, 254.2, 320.1; 536/23.5, 23.51; 935/11, 29, 37, 38, 56, 60, 69 [IMAGE AVAILABLE]

=> s gamma(w)chain)

UNMATCHED RIGHT PARENTHESIS 'CHAIN)'

=> s (gamma(w)chain)(P)(cytokine? or lymphokine? or interleukin?)

91388 GAMMA
287976 CHAIN
2927 CYTOKINE?
2166 LYMPHOKINE?
4461 INTERLEUKIN?
L2 11 (GAMMA(W)CHAIN)(P)(CYTOKINE? OR LYMPHOKINE? OR INTERLEUKIN?)
)

=> s l2(P)antibod?

26891 ANTIBOD?
L3 2 L2(P)ANTIBOD?

=> d l3 1-2

1. 5,582,826, Dec. 10, 1996, Monoclonal **antibodies** which bind the **gamma chain** of human **interleukin-2** receptor; Toshiro Shimamura, et al., 424/143.1; 530/387.1, 388.1, 388.22, 388.23 [IMAGE AVAILABLE]

2. 4,474,892, Oct. 2, 1984, Two-site immunoassays using monoclonal antibodies of different classes or subclasses and test kits for performing same; Ferid Murad, et al., 436/513, 519, 548, 804, 808, 819, 824, 828 [IMAGE AVAILABLE]

=> d l3 1-2 kwic

US PAT NO: 5,582,826 [IMAGE AVAILABLE] L3: 1 of 2
TITLE: Monoclonal **antibodies** which bind the **gamma chain** of human **interleukin-2** receptor

CLAIMS:

CLMS(1)

What is claimed is:

1. A polypeptide which (1) is a monoclonal **antibody** produced by the hybridoma cells of TUGh4 (FERM BP 4642), TUGh5 (FERM BP4643) or AG14 (FERM BP 4648) and (2) has an activity of inhibiting human **interleukin 2** triggered responses which result by binding of the **gamma. chain** of human **interleukin 2** receptor to the **.beta.-chain** of human **interleukin 2** receptor.

CLAIMS:

CLMS(2)

2. An immunosuppressant composition comprising a carrier and a therapeutically effective amount of a polypeptide which (1) is a monoclonal **antibody** produced by the hybridoma cells of TUGh4 (FERM BP 4642), TUGh5 (FERM BP4643) or AG14 (FERM BP 4648) and (2) has an activity

of inhibiting human **interleukin 2** triggered responses which result by binding of the **.gamma. chain** of human **interleukin 2** receptor to the **.beta.-chain** of human **interleukin 2** receptor.

US PAT NO: 4,474,892 [IMAGE AVAILABLE]

L3: 2 of 2

DETDESC:

DETD(3)

The . . . have two or more antigenic determinants (epitopes) that are distinct (not identical) immunologically and whose sites are such that complementary **antibodies** may recognize and bind to them. The term "antigen" as used herein is intended to include both immunogenic entities (entities that elicit an immune response) as well as entities (haptens) that are recognized and bound by **antibodies** but do not elicit an immune response. Antigens present in body fluids include cells, enzymes, proteins, peptides, cell surface antigens and other cellular components, differentiation antigens, **lymphokines**, growth factors, hormones, drugs, toxins, viruses bacteria and other pathogens. Specific examples of multideterminant antigens for which two-site assays have. . . growth hormone, tetanus toxin, albumin, ovalbumin, X antigen, ferritin, GFA protein, S-100 protein, alpha-fetoprotein, antithymocyte globulin, blood coagulation factor VIII, **.gamma. chain** of hemoglobin F, follicle-stimulating hormone, and human chorionic gonadotropin.

=> d 13 1-2 date

L3: 1 of 2

TITLE: Monoclonal **antibodies** which bind the **gamma chain** of human **interleukin-2** receptor

US PAT NO: 5,582,826 [IMAGE AVAILABLE] DATE ISSUED: Dec. 10, 1996

APPL-NO: 08/230,843 DATE FILED: Apr. 21, 1994

FRN-PR. NO: 5-094491 FRN FILED: Apr. 21, 1993

FRN-PR. CO: Japan

FRN-PR. NO: 6-036065 FRN FILED: Mar. 7, 1994

FRN-PR. CO: Japan

L3: 2 of 2

TITLE: Two-site immunoassays using monoclonal antibodies of different classes or subclasses and test kits for performing same

US PAT NO: 4,474,892 [IMAGE AVAILABLE] DATE ISSUED: Oct. 2, 1984

APPL-NO: 06/466,798 DATE FILED: Feb. 16, 1983

=> d 12 1-11

1. 5,716,780, Feb. 10, 1998, Method of constructing sequence-specific DNA-binding molecules; Cynthia A. Edwards, et al., 435/6; 436/501 [IMAGE AVAILABLE]
2. 5,705,608, Jan. 6, 1998, Human IL-2 receptor .gamma. chain molecule; Kazuo Sugamura, et al., 530/324, 345, 350, 351 [IMAGE AVAILABLE]
3. 5,700,909, Dec. 23, 1997, Prosaposin and cytokine-derived peptides; John S. O'Brien, 530/326, 327 [IMAGE AVAILABLE]
4. 5,693,463, Dec. 2, 1997, Method of ordering sequence binding preferences of a DNA-binding molecule; Cynthia A. Edwards, et al., 435/6, 7.23; 536/23.1; 935/76, 77 [IMAGE AVAILABLE]
5. 5,635,597, Jun. 3, 1997, Peptides that bind IL-2 receptors; Ronald W. Barrett, et al., 530/327, 300, 350, 351 [IMAGE AVAILABLE]
6. 5,582,826, Dec. 10, 1996, Monoclonal antibodies which bind the **gamma chain** of human **interleukin-2** receptor; Toshiro Shimamura, et al., 424/143.1; 530/387.1, 388.1, 388.22, 388.23 [IMAGE AVAILABLE]
7. 5,578,444, Nov. 26, 1996, Sequence-directed DNA-binding molecules compositions and methods; Cynthia A. Edwards, et al., 435/6, 7.23; 536/23.1; 935/76, 77 [IMAGE AVAILABLE]
8. 5,556,947, Sep. 17, 1996, Monoclonal antibody recognizing a surface molecule on a subset of antigen-stimulated T cells and on certain malignancies of T and B cell origin; Glenn H. Bock, et al., 530/391.3, 388.2, 388.73, 388.75, 388.85, 391.7 [IMAGE AVAILABLE]
9. 5,532,158, Jul. 2, 1996, Interleukin-2 receptor deficient mammals; Haruhiko Suzuki, et al., 435/354, 172.3, 320.1; 800/2, DIG.1; 935/24, 70 [IMAGE AVAILABLE]
10. 5,510,259, Apr. 23, 1996, Human IL-2 receptor .gamma. chain molecule; Kazuo Sugamura, et al., 435/356, 252.3, 320.1, 361; 536/23.1, 23.5, 23.52; 935/6, 11, 22, 23, 24, 66, 70, 72, 73 [IMAGE AVAILABLE]
11. 4,474,892, Oct. 2, 1984, Two-site immunoassays using monoclonal antibodies of different classes or subclasses and test kits for performing same; Ferid Murad, et al., 436/513, 519, 548, 804, 808, 819, 824, 828 [IMAGE AVAILABLE]

=> d 12 1-11 kwic

SYSTEM LIMITS EXCEEDED - DISPLAY ENDED

=> d 12 2 kwic

US PAT NO: 5,705,608 [IMAGE AVAILABLE]

L2: 2 of 11

CLAIMS:

CLMS(1)

We claim:

1. A purified **interleukin-2** receptor **.gamma.-chain** polypeptide comprising an amino acid sequence selected from the group consisting of SEQ ID NO:4, SEQ ID NO:7, SEQ ID. . .

=> s l2 2 and antibod?

MISSING OPERATOR '
L2 2 AND'